

NRO

DEPARTMENT OF THE AIR FORCE
WASHINGTON

GAMBIT

OFFICE OF THE UNDER SECRETARY

14 APR 1965

MEMORANDUM FOR CHAIRMAN, USIB

SUBJECT: KH-7 Coverage of High Priority South China Targets

As indicated at the 6 April USIB meeting, in view of the difficulties being experienced in securing adequate coverage of high priority South China targets, the NRO has analyzed the probable return from a GAMBIT KH-7 mission optimized for this specific purpose. The purpose of this memorandum is to amplify General Stewart's remarks at the USIB meeting. No action by the Board is requested at this time.

A wide range of inclination angles and orbital parameters (including orbit adjust maneuvers, where appropriate) has been considered for the GAMBIT vehicle against the South China targets. Some of the particulars and projected results for three such missions are as follows:

a. Mission A: A 144° inclination angle (Westerly launch from the WTR), plus a first-day orbit adjust, was selected for this case. This orbit would provide access in a mono/stereo mix to 18 of the 19 targets considered; however, climatology studies indicate that, at most, only 7-8 would be photographed in clear weather during a four-day mission. Because of the low inclination angle, access to Soviet targets would be limited to a few in the Southwesterly portion. It would be necessary to recover the capsule either at night or in a South-North direction.

b. Mission B: The 85° inclination, without orbit adjust, studied in this case would provide access to 10 of the 19 targets considered; however, only about four of these would be covered in cloud-free photography under average climatology in a four-day mission. This orbit, of course, provides good access to Sino/Soviet targets.

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c. Mission C: A 107.5° inclination, with an orbit adjust on the first day, was selected for this case. This orbit would provide access to 15 of the 19 targets considered; and under average climatology conditions, six of these would be covered in cloud free photography. This orbit provides excellent access to Sino/Soviet targets. As a matter of interest, GAMBIT 4016 was flown at an inclination angle of 107° (without an orbit adjust), and seven of the 19 targets were photographed during the four-day mission in slightly better-than-average climatology conditions.

All factors considered (the probable number of South China targets that would be covered; access to Soviet targets; operational difficulties, etc), it would not appear worthwhile to fly a GAMBIT vehicle at the optimum inclination (144°) for South China coverage except in a situation of great national emergency. The inclinations normally employed by the NRO achieve comparatively good coverage of that area without sacrifice of Soviet coverage and at minimum operational risk.



Brockway McMillan
Director
National Reconnaissance Office

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